

forces sensed by the touch display. Where these forces are determined not to contribute to an accurate location of the touch, they can be removed by the touch controller as described in commonly assigned in U.S. patent application Ser. No. 09/882,338, U.S. Pat. No. 6,285,385, the contents of which are incorporated herein by reference.

[0039] The advantages of the present invention will be appreciated from the above description. The invention should not be considered limited to the preferred embodiments. Alternative embodiments may be readily apparent to the skilled artisan upon review of the present specification. For example, other functionality may be incorporated into the touch surface. A variety of end use applications of the described touch display will also become apparent.

[0040] The present invention should not be considered limited to the particular examples described above, but rather should be understood to cover all aspects of the invention as fairly set out in the attached claims. Various modifications, equivalent processes, as well as numerous structures to which the present invention may be applicable will be readily apparent to those of skill in the art to which the present invention is directed upon review of the instant specification.

We claim:

1. A touch display comprising:

an electroluminescent (EL) display viewable through a touch surface; and

a plurality of sensors disposed to sense a location of a force applied to the touch surface based on forces passed through the touch surface to the sensors.

2. A touch display as recited in claim 1, wherein the touch surface comprises an emitting surface of the EL display.

3. A touch display as recited in claim 2, wherein the force sensors are disposed on a side of the EL display opposite the touch surface.

4. A touch display as recited in claim 1, wherein the touch surface comprises a transparent touch element disposed on an emitting surface of the EL display.

5. A touch display as recited in claim 4, wherein the plurality of force sensors are disposed between the emitting surface of the EL display and the transparent touch element.

6. A touch display as recited in either of claims 4 or 5, wherein the transparent touch element comprises a contrast enhancement layer.

7. A touch display as recited in claim 6, wherein the contrast enhancement layer comprises a circular polarizer.

8. A touch display as recited in claim 6, wherein the contrast enhancement layer comprises a color filter.

9. A touch display as recited in claim 1, further comprising an inertial sensor disposed to sense inertial forces applied to the display.

10. A touch input display comprising:

an electroluminescent (EL) display element having a touch surface;

a plurality of sensors configured to output signals representative of forces applied to the sensors, the sensors being arranged to receive a force representative of a force applied to the touch surface;

a processor coupled to the force sensors to determine a location of a touch on the touch surface based on the output signals and for altering information displayed on the EL display element in response to the touch.

11. A touch input display as recited in claim 10, wherein the touch surface comprises an emitting surface of the EL display element.

12. A touch input display as recited in claim 10, wherein the touch surface comprises transparent overlay disposed on an emitting surface of the EL display element.

13. A touch input display as recited in claim 12, where in the force sensors are disposed between the emitting surface of the EL display element and the transparent overlay.

14. A touch input display as recited in claim 13, wherein the force sensors comprise two conductive elements spaced apart to form a capacitor and the output signals of the force sensors represents relative movement of the two conductive elements.

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